

ABSTRACT

A process for the examination of biocompartments (1), having a micro-flow chamber (2) which contains a biocompartment (1) which is continually or intermittently subjected to the through-flow of a culture medium. In a culture medium zone proximal to the biocompartments (1), an electrical potential is applied in such a manner, that from a substance in the culture medium which is released or consumed by the biocompartments (1), OH^- and/or H^+ ions are formed. During the application of the potential, a first measurement ($\text{pH}_{1,1}$, $\text{pH}_{1,3}$) for the pH value of the culture medium is measured. The potential is then switched off or changed in such a manner that the formation of OH^- and/or H^+ ions from the said substance is stopped. Before or after the measuring of the first measured value, ($\text{pH}_{1,1}$, $\text{pH}_{1,3}$) with switched off electrical potential, a second measured value ($\text{pH}_{2,2}$, $\text{pH}_{2,4}$) is measured for the pH value of the culture medium. After the entire measurement is repeated at least once, then from the first and second measurement values, the concentration change of the substance in the culture medium and the acidification or alkalinization of the culture medium is determined.